

NOTE: The document identifier and heading have been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

INCH-POUND

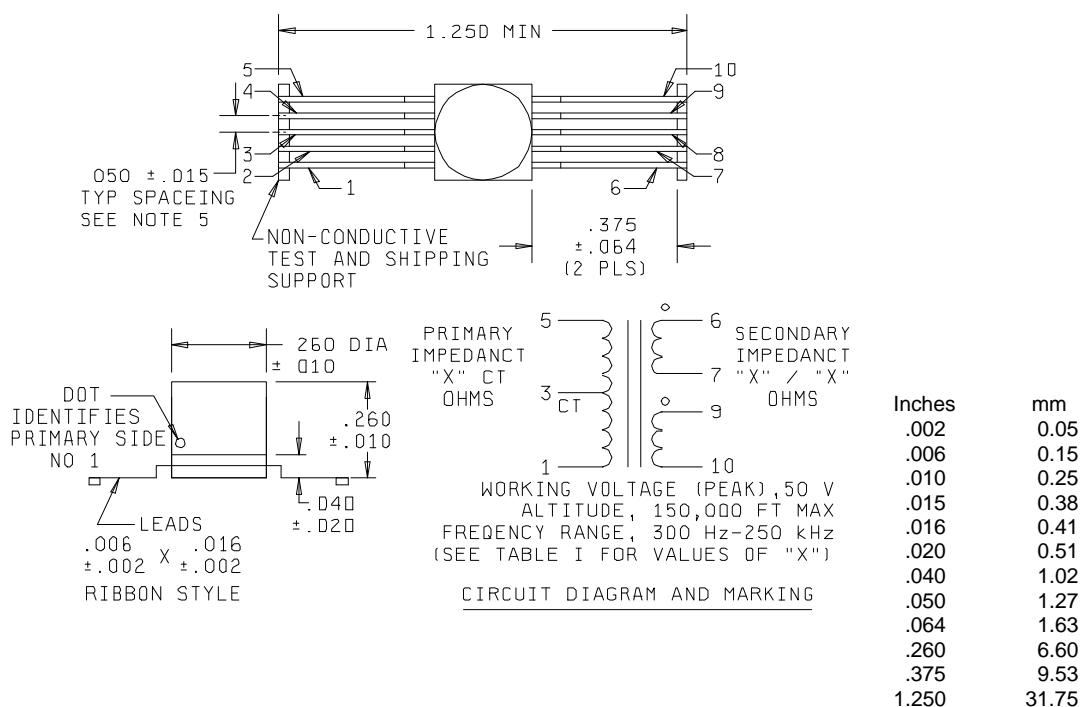
MIL-PRF-27/173E
7 April 1992
SUPERSEDING
MIL-T-27/173D
22 March 1985

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, AUDIO FREQUENCY, MICRO-MINIATURE, TF5R21ZZ

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the top and bottom of the case.
4. Electrical values shall be marked as specified in table I as applicable.
5. Terminal spacing is on center.

FIGURE 1. Dimensions and configurations.

(E) denotes changes

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REQUIREMENTS: (When numbers in parentheses, i.e., (1-5) are used, they indicate the winding and the extreme terminals of the winding. When the extreme terminals of two windings are used, i.e., (6-10), the windings are connected in series, i.e., terminals 7 and 9 are connected.

Electrical ratings: See table I.

Working voltage (peak): 50 V.

Frequency range: 300 Hz to 250 kHz.

Primary dc current (1-5): 0 ampere.

TABLE I. Electrical ratings. 1/

Dash number	Primary impedance (1-5)	Secondary impedance (6-10) 2/	Primary dc resistance (1-5)	Primary power level at 1 kHz (max)	Secondary dc resistance (6-10)
	<u>Ohms ct</u>	<u>Ohms</u>	<u>Ohms ±25%</u>	<u>mW</u>	<u>Ohms ±25%</u>
01	25 k	1000/250 Split	2400	40	78
02	1500	600/150 Split	150	75	65
03	150	12/3	16	80	1.85
04	300	600/150	30	80	65
05	400	400/100	45	80	45
06	500	50/12.5	58	80	5.5
07	600	600/150	65	80	65
08	1000	1000/250	110	80	100
09	2000	8000/2000	177	75	745
10	10 k	500/125	900	75	45
11	10 k	1200/300	900	75	100
12	10 k	2000/500	900	75	160
13	10 k	10k/2500	900	75	750

1/ Complete qualification testing and approval to M27/173-01 shall be sufficient to grant qualification approval to M27/173-02 through -13.

2/ By paralleling the secondary windings, one-fourth of the specified impedance is available.

Design and construction:

Dimensions and configurations: See figure 1.

Duty cycle: Continuous.

(E) Terminals: Type LR (---)E-32-C1, per MIL-STD-1276.

Weight: 1.50 grams, maximum.

Altitude: 150,000 feet, maximum.

Operating temperature range: -55°C to +105°C

(E) Terminal strength: MIL-STD-202, method 211, test condition B, 5 bends.

Vibration (high frequency): MIL-STD-202, method 204, test condition D.

Solderability: MIL-STD-202, method 208.

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Dielectric withstanding voltage:

At sea level: 200 V rms.

At barometric pressure: 125 V rms.

Electrical characteristics: See table II.

Harmonic distortion: Total harmonic content of the output shall be a maximum of 5 percent at the specified power level and 1 kHz (see table I).

Frequency response: See table II, all impedances are loaded to 1 mW.

Reference frequency: 1 kHz.

Insertion loss: Insertion loss shall be a maximum of 4.0 dB at the specified power level (see table I).

Polarity: Additive, with (5-6) and (7-9) connected.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/173-(dash number from table I).

TABLE II. Electrical characteristics.

Dash number	Frequency response at 300 Hz to 250 kHz, ± 2 dB	
	Z_S (1-5)	Z_L (6-10)
	<u>Ohms</u>	<u>Ohms</u>
01	25 k	1000
02	1.5 k	600
03	150	12
04	300	600
05	400	400
06	500	50
07	600	600
08	1000	1000
09	2 k	8 k
10	10 k	500
11	10 k	1.2 k
12	10 k	2 k
13	10 k	10 k

SUPERSESSON DATA:

MIL-T-27/173 supersedes MS21398(USAF) which was inactive for design after 21 March 1977. The transformer, M27/173-02, covered by this specification sheet supersedes PIN MS21398-1, type TF5RX122Z.

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CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - AR
Navy - SH, OS
Air Force - 17, 99
DLA - ES

User activities:

Army - ME
Navy - AS, MC
Air Force - 19

Preparing activity:

Army - ER

Agent:

DLA - ES

(Project 5950-0786)